



# BROAD EXAMINATIONS®

## P.7 MATHEMATICS EXAMINATION

### MID – TERM II 2024

Time allowed: 2 hours 30 minutes.

Random No.	Personal No.

Pupil's Name: .....

School Name: .....

District Name: .....

#### Read the following instructions carefully:

1. This paper is made up of two sections: A and B.
2. Section A has **20** questions (**40 Marks**).
3. Section B has **12** questions (**60 Marks**).
4. Answer **ALL** questions in both sections A and B.
5. All answers must be written in the space provided in blue or black ball point pens and ink. **Only diagrams should be done in pencil.**
6. Unnecessary crossing of answers will lead to loss of marks.
7. Any handwriting, which cannot be easily read, may lead to loss of marks.
8. Do **not** fill anything in the boxes indicated for Examiners' use only.

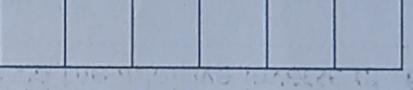
FOR EXAMINER'S USE ONLY		
PAGES	MARKS	SIGN
Page 2		
Page 3		
Page 4		
Page 5		
Page 6		
Page 7		
Page 8		
<b>TOTAL</b>		

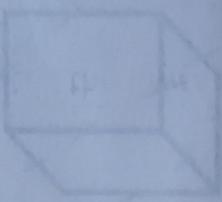
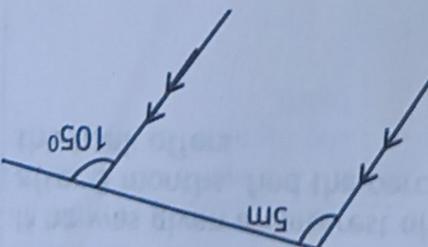
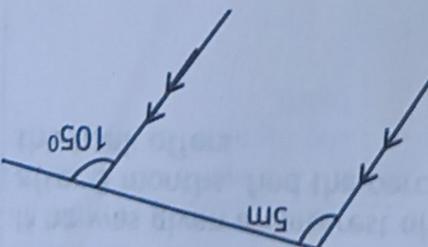
#### Teacher's comment to the learner

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Approved by:

Team Head Mathematics Dept.

1.	SECTION A. (40 MARKS)										
2.	Given that $B = \{a, m, e, r, t\}$	Find the number of elements in set $D = \{r, a, h, o, k, e\}$	$H10$ $137 = 1 \text{ hundreds } \underline{\quad} \text{ tens } \underline{\quad} \text{ ones}$								
3.	Shade $\frac{2}{3}$ of the diagram below.										
4.	A bus made 295 trips to Kampala in 2022. If it carried an average of 50 people per trip, find the total number of people it carried in 2022.										
5.	The bar graph below represents the number of trees planted by three schools. Use it to answer the questions about it.	<table border="1"> <thead> <tr> <th>School</th> <th>Number of trees</th> </tr> </thead> <tbody> <tr> <td>Abuja P/S</td> <td>25</td> </tr> <tr> <td>Muto P/S</td> <td>30</td> </tr> <tr> <td>Matok P/S</td> <td>5</td> </tr> </tbody> </table>	School	Number of trees	Abuja P/S	25	Muto P/S	30	Matok P/S	5	(a) Which school planted the lowest number of trees? (b) How many trees did Muto Primary School plant?
School	Number of trees										
Abuja P/S	25										
Muto P/S	30										
Matok P/S	5										

	<p>7. Find the value of <math>m</math> in the trapezium below.</p>
	<p>6. Work out the area of the trapezium below.</p>
	<p>9. Find the additive inverse of <math>-6</math>.</p>
<p>8. Write <math>80,996</math> in words.</p>	<p>10. Simplify; <math>0.24 \div 0.4</math></p>
<p>9. Find the additive inverse of <math>-6</math>.</p>	<p>11. Change 3:45p.m. to 24 hour clock system.</p>
<p>8. Write <math>80,996</math> in words.</p>	<p>12. Without dividing, show that <math>576</math> is divisible by <math>9</math>.</p>
<p>9. Find the additive inverse of <math>-6</math>.</p>	<p>13. Given that US\$ <math>1</math> costs Ugsh. <math>3744</math> and Ksh <math>1</math> costs Ugsh. <math>26</math>, what is the cost of one US dollar in Kenya shillings?</p>

14. Apollo deposited sh. 80,000 in a bank which offers an interest rate per annum. If he was given an interest of sh. 1000 after 3 months, find the percentage rate the bank offers.



15. The average of 11, -2, 6,  $(w+5)$  and 8 is 6. Find the value of  $w$ .

16. Draw an angle of  $67^\circ$  using a protractor.



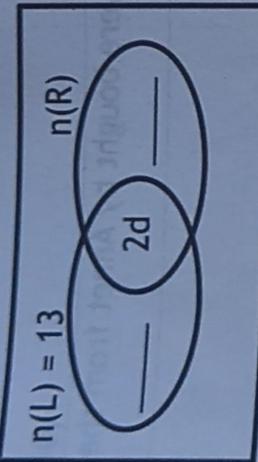
17. Simplify;  $2k - 3p + 7k - 2p$
- $2k - 3p + 7k - 2p$   
 $= 2k + 7k - 3p - 2p$   
 $= 9k - 5p$
18. Given that set K has 32 subsets, find  $n(K)$ .
- $\text{Given}$   
 $n(K) = 32$   
 $2^n = 32$   
 $2^n = 2^5$   
 $n = 5$
19. A temple was constructed in 27BC and later demolished in 33AD. How many years did the temple last?
- $27 \text{ BC} \rightarrow 27 \text{ BC}$   
 $33 \text{ AD} \rightarrow 33 \text{ AD}$   
 $27 \text{ BC} \rightarrow 33 \text{ AD}$   
 $27 + 33 = 60$

20. The figure below is a fuel tank at a certain petrol station.  
Find the capacity of the fuel tank in litres.



**SECTION .B. (60 MARKS)**

21. In a football team, 13 players use the left leg(L), 16 players use the right leg(R) only and 2d players use both legs.
- (a) Use the information above to complete the venn-diagram below.



- (c) Find the probability of picking a player who uses the left leg to be the team captain.

**(06 Marks)**

22. (a) Work out;  $\begin{array}{r} 1 & 1 & 0 & 1_{\text{two}} \\ \times & 1 & 1_{\text{two}} \\ \hline \end{array}$
- (b) Given that  $76_y = 234_{\text{five}}$ , find the unknown base y.

**(06 Marks)****(04 Marks)**

23. In the figure below, line FD is parallel to AC, line AE is perpendicular to EB, angle FEA is  $55^\circ$  and angle EBD is  $65^\circ$ . Use it to answer the questions that follow.

- (a) Find the size of angle EBC;



(b) Work out the size of angle BDC.

(06 Marks)

24. The shopping list below shows the items that were bought by Annet from the supermarket in preparation for Christmas.

-2kg of sugar at sh. 5000 per kg

-500g of curry powder at sh. 9000 per kilogram

$1\frac{1}{2}$ kg of rice at sh. 6000 each kilogram

A bottle of juice at sh. 15000

If she paid sh. 37800, calculate the percentage discount offered.

(06 Marks)

25. (a) Twelve pencils are packed in a packet and 25 packets are packed in a box. If the cost of 2 boxes of pencils is sh. 150,000, calculate the cost of each pencil.

(b) Work out  $(36 \div 4) + (24 \div 4)$  using distributive property.

(05 Marks)

26. In a tournament, 3 points are awarded to a team for every game won and a point is deducted for every game lost. Each team played 10 games.

(a) How many points did a team get given that it won 6 games?

(b) If a team got 22 points, how many games did it lose?

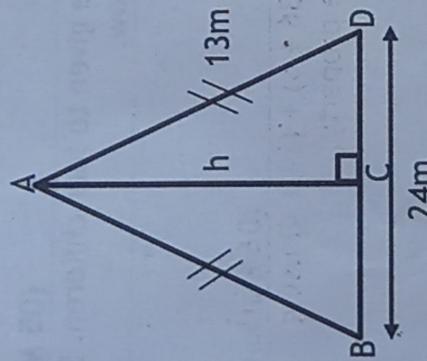
(05 Marks)

27. Arrange  $\frac{3}{10}$ , 40%, 0.75 and  $\frac{12}{25}$  in descending order.

28. A truck covered 81km in 90 minutes. Calculate its speed in metres per second.

(04 Marks)

29. Study the figure below carefully and answer questions that follow



- (a) Find the length of AC in metres.

(04 Marks)

- (b) Calculate the area of triangle ABD.

30. (a) Using a ruler, a pencil and a pair of compasses only, construct a square MATH where diagonal MT = AH = 6cm.

(05 Marks)

- (b) Measure the length of the side of the square.

(05 marks)

31. Kalanzi bought a radio and later sold it making a profit of 20% to Kapere who later sold it to Mukwaya making a profit of 5%. If Kapere paid sh. 96,000;
- (a) how much money did Kalanzi pay for the radio?
- (b) calculate the amount of money which Mukwaya paid for the radio.

- (05 Marks)
32. The table below shows the number of sweets that were given to four children. Study it carefully and use it to answer the questions that follow.

Bob			
Beth			
Betty			
Bonny			

- (05 Marks)
- (a) Who received the highest number of sweets?
- (b) How many sweets did Betty receive?
- (c) Calculate the average number of sweets that were received by four children.

END

(05 Marks)